

IMPROVED EUROPIUM-ACTIVATED PHOSPHORS CONTAINING OXIDES OF RARE-EARTH AND GROUP-IIIB METALS AND METHOD OF MAKING THE SAME

Abstract of Disclosure

Europium-activated phosphors comprise oxides of at least a rare-earth metal selected from the group consisting of gadolinium, yttrium, lanthanum, and combinations thereof and at least a Group-IIIB metal selected from the group consisting of aluminum, gallium, indium, and combinations thereof. A method for making such phosphors comprises adding at least a halide of at least one of the selected Group-IIIB metals in a starting mixture. The method further comprises firing the starting mixture in an oxygen-containing atmosphere. The phosphors produced by such a method exhibit improved absorption in the UV wavelength range and improved quantum efficiency.